

REMARKS

Claims 24-45 are pending and rejected in this application, claim 44 is amended hereby.

Responsive to the rejection of claims 41 (corresponding to originally filed claim 19), 42 (corresponding to originally filed claim 20), 43 (corresponding to originally filed claim 21) and claim 44 (corresponding to originally filed claim 22), Applicants have amended the specification on pages 7 and 8 to recite the limitations found in these claims as originally filed in the application. Applicants believe that the specification now provides proper antecedent basis for the claimed subject matter.

Responsive to the rejection of claim 44 under 35 U.S.C. § 112, Applicants have amended claim 44 to remove the phrase “as said first application medium and said second application medium are applied to said moving base”. Grammage of paper material is a industry term and is conventionally measured in the final state, that is when the paper material has completed the manufacturing process. It is to be noted that the claim, as originally presented, indicated that the first and second curtain applicator units produce a grammage of coated material, indicating that the grammage is determined in the final state. It is believed that with the amendment to claim 44 and the above discussion, claim 44 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 24-34, 36-39 and 41-45 under 35 U.S.C. § 103(a) as being unpatentable over Nakamura et al. (U.S. 4,230,743) in view of the newly cited patent to Finnicum et al. (U.S. 5,206,057), Applicants offer the following arguments and submit that claims 24-34, 36-39 and 41-45 are now in condition for allowance.

Nakamura et al. disclose a process for producing pressure sensitive copying paper illustrating embodiments shown in Figs. 3 and 4. Fig. 3 shows an embodiment where sheets substantially abut one another between stabilizing poles to drop onto a web for coating purposes.

Fig. 4 shows an alternative embodiment where first and second sheets of material, illustrated as being significantly spaced from one another, are dropped by gravity onto a moving web.

Finnicum et al. show a device for applying a curtain coating for photographic film in which a multi-layer of material passes through slots 14 and is dropped onto a web by gravity. The curtain 17 is bounded by side walls 19, 20 and a lateral wall 21. A valve mechanism permits a fluid to pressurize the space between the curtain 17 and the perimeter walls via a conduit 22 and valve 23 in order to control where on the arc of the web the curtain 17 impinges.

In contrast, claim 24, as currently presented, calls for forming a pressure differential in a space partially bounded by a first and second curtain, the pressure differential being relative to an ambient atmospheric pressure. Applicants submit that such an invention is neither taught, disclosed nor suggested by Nakamura et al., newly cited Finnicum et al. or any of the other cited references, alone or in combination and include distinct advantages thereover.

Nakamura et al. disclose a process for coating paper that involve dropping multiple curtains by gravity onto a flowing web. The curtains either abutt one another, as disclosed in Fig. 3, or are widely spaced, as shown in Fig. 4. Nakamura et al. contain no reference to use of pressure differentials for stabilizing and interacting between adjacent curtains. Finnicum et al. shows a pressure differential for a controlled pressure within a chamber bounding the curtain to control the location of its impingement on a web, but does not show the use of a pressure differential to interact with first and second curtains of material. In fact, Finnicum et al. show abutting and layered materials that all flow to a web in unison by means of a single curtain. In order to permit the combination of Finnicum et al. with Nakamura et al. there needs to be a suggestion or teaching in Nakamura et al. regarding pressure differential which is notably absent. Finnicum et al. only teaches manipulation of a single web and not an interaction between adjacent webs to control their characteristics in unison.

Applicants' invention has a distinct advantage in that the pressure is controlled relative to ambient in an interactive manner between the first and second curtains, which provide benefits not found in Nakamura et al. or Finnicum et al., separately or together. By manipulation of the pressure, the separation of curtains from guides and the wetting of the top coats of the coats on each other can be improved or the precoats can be better anchored on the web to be coated. For all of the foregoing reasons, Applicants submit that claim 24 and claims 25-34, 36-39 and 41-45 which depend therefrom are now in condition for allowance, which is hereby respectfully requested.

Claim 35 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura et al. in view of Finnicum et al. and further in view of the patent to Shay (U.S. 5,192,592). Claim 35 depends from claim 24 which is now in condition for allowance and is patentable for the same reasons as outlined above. In addition, claim 35 adds even further limitations to the already patentable combinations set forth in claim 24. Accordingly, Applicants submit that claim 35 is now in condition for allowance, which is hereby respectfully requested.

Claim 40 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura et al. in view of Finnicum et al. and further in view of Saito et al. (U.S. 5,136,970). Claim 40 is dependent upon claim 24 which is now in condition for allowance and claim 40 is also in condition for allowance for the same reasons as discussed above. Saito et al. adds nothing additional to the combination that indicates interactive control of pressure differential. Accordingly, Applicants submit that claim 40 is now in condition for allowance, which is hereby respectfully requested.

For the foregoing reasons, Applicants submit that the pending claims are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that no combination of the cited references teaches,

discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,

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